

**Governor's Representatives on Colorado River Operations  
States of Arizona, California, Colorado, Nevada, New Mexico, Utah, and  
Wyoming**

July 19, 2011

Via E-Mail - Protocol@usbr.gov

Mr. Larry Walkoviak, Regional Director  
Attn: Mr. Dennis Kubly  
Bureau of Reclamation  
Upper Colorado Regional Office  
125 South State Street, Room 7218  
Salt Lake City, Utah 84138

Re: Comments on the second *Draft Environmental Assessment for Development and Implementation of a Protocol for High-flow Experimental Releases from Glen Canyon Dam, Arizona, 2011-2020*

Dear Messrs. Walkoviak and Kubly,

The Colorado River Basin States and the Upper Colorado River Commission (referred to herein as "the States") appreciate the opportunity to comment on the second *Draft Environmental Assessment for Development and Implementation of a Protocol for High-Flow Experimental Releases from Glen Canyon Dam, Arizona, 2011-2020* ("DEA") released by the Bureau of Reclamation ("Reclamation") on July 1, 2011.

Consistent with the interests identified in the joint Colorado River Basin States comment letter, dated March 18, 2011, we ask that you please consider the following comments in finalizing the National Environmental Policy Act ("NEPA") process for the Development and Implementation of a Protocol for High-Flow Experimental Releases ("HFE Protocol") and include them in its administrative record.

**1. Overall:** The DEA is an improvement over the prior DEA. Reclamation's revisions to this DEA better clarify: 1) the purpose and need for the HFE Protocol; 2) the rapid-response approach; 3) the need for consultation with the States in the decision to conduct a high-flow experimental release ("HFE"); and 4) the supremacy of the requirement to comply with the 2007 Interim Guidelines during the project. While this letter identifies additional clarifications that will benefit the document, we very much appreciate Reclamation's efforts in refining these issues. There are, however, remaining concerns with the proposed action's decision-making processes, linkage to non-native fish control mechanisms, and the description of the experimental action, which are the subject of specific comments and observations set forth below.

**2. Decision-Making Process:** The DEA summarizes a process for determining whether and when to implement an HFE under the Protocol. DEA at 35-45. Per this description, the States applaud the Protocol's requirement to consult with the Basin States, to consider the input of the Adaptive Management Working Group ("AMWG"), and to consider potential effects on other resources before determining whether to conduct any particular HFE. As described, however, the decision-making framework for the HFE Protocol may not obviate the need for additional NEPA analyses to conduct, at the very least, consecutive HFEs.

To assure continued NEPA compliance throughout the life of the Protocol, the Final Environmental Assessment and/or decisional documentation should set forth in greater detail how the Department of Interior ("Interior") will determine and weigh the suitability of resource conditions in the face of uncertain impacts involved in conducting consecutive HFEs. *See* DEA at 50. To this end, the States recommend clarifying:

- i. The standards relied upon to determine when resource conditions are suitable for an HFE.
- ii. When the annual agency report assimilating and synthesizing the effects of HFEs will be finalized to inform the decision-making process. *See* DEA at 35, 36. Will the annual report be completed so as to inform decisions for the upcoming HFE window? If not, how will Interior decide to conduct an HFE in the absence of updated information?
- iii. How limitations identified in Section 1.8.2 (pages 20-21), as well as the additional limits set forth in this comment letter, will be incorporated into the decision-making process.
- iv. Why there is a need to distinguish between staff recommendations that Interior will consider and AMWG recommendations that Interior may consider. DEA at 41. How does this distinction fit with the Protocol's dependence on funding through the biennial Glen Canyon Dam Adaptive Management Program budget under the Planning and Budget Component? *See* DEA at 35.
- v. Where the decision to conduct an HFE based on the above variables will be documented.

**3. Non-native Fish Control:** The DEA's description of the linkages and differences between the HFE Protocol and Non-Native Fish Control EAs is much appreciated. It remains unclear, however, whether and to what extent the Protocol can be implemented in the absence of non-native fish controls. The DEA appears to rely on implementation of the non-native fish control action as mitigation to HFE impacts. *See, e.g.,* DEA at 12, 94, 96. At the same time, Interior is still in the process of determining how non-native fish controls will be implemented. The DEA should, therefore, clarify whether non-native fish control is needed to mitigate impacts to resources as a result of high flow events and/or that the HFE Protocol will not be implemented unless and until non-native fish control measures or suitable alternatives are implemented.

**4. Experimental Action:** The DEA's description of the HFE Protocol and beach/habitat building flows ("BHBFs") in the Purpose and Need section remains confusing. At page 19, the DEA discusses the HFE Protocol but does not clearly identify it as an experimental action.

The DEA also inserts a new paragraph discussing the BHBF as a management action that the Protocol will not modify. Such description implies that BHBFs may occur in addition to the Protocol, which is not the intent as understood by the States. The Protocol does modify the BHBF management action by imposing an experimental action for a temporary period. Following that temporary period, the management action as set forth in the 1996 Record of Decision ("ROD") or 1997 Operating Criteria will be reinstated. Any future modification to the management actions, therefore, would still require environmental compliance pursuant to NEPA. Finally, the DEA states that the HFE Protocol is not intended to determine the legal issues that went into formulating the BHBF approach, and that "positions and rights concerning the issues related to BHBF management strategies as compared to experimental releases of water from Lake Powell are reserved. . . ." The meaning of the quoted statement is unclear. To be clear, we reserve our positions and rights concerning high-flow releases whether they are deemed experimental or management actions. In the past, we have agreed to not challenge a high-flow release that bypasses the power plant facilities in the interest of comity and gaining useful information. That, however, does not presume we have acquiesced to any and all experiments in the future.

To address the above comments, the States recommend editing the DEA to identify the HFE Protocol as an experimental action, clarify how the Protocol fits with the management actions under the 1996 ROD, and state Interior's intention that development and implementation of the HFE Protocol as an experimental action does not reflect any legal determination as to whether operation of Glen Canyon Dam can include bypassing the power plant in the absence of dam safety needs.

##### **5. Specific Observations:**

- a) Executive Summary – At vii-xii: In summarizing the HFE Protocol's predicted impacts on natural resources, the Executive Summary intermittently mentions what Interior may do to mitigate impacts or uncertainties. This summary should be consistent to explain what mitigation, if any, will be applied in the event a negative impact occurs throughout the 10-year life of the protocol. *Compare* Executive Summary description of Aquatic Food Base, Humpback Chub, and Hydropower *with* description of Cultural Resources and Recreation.
- b) Relationship to LTEMP – At 9: The DEA states that information from the Protocol is "essential to ensuring that fully informed decisions are made as part of the LTEMP [Long Term Experimental and Management Plan] process." It would be helpful to understand whether and to what extent implementation and analysis of the HFE Protocol will be timed to be useful to the LTEMP process.
- c) Purpose and Need – At 10: The purpose and need statement should further clarify the Protocol's specific goals and identify how sediment deposition would likely achieve those goals in a manner that can be readily assessed. To this end, the FEA and decisional documentation should, in addition to identifying a generic objective that sediment conservation can "provide for key fish and wildlife habitat, protect archeological sites and vegetation structure, and provide camping opportunities in Grand Canyon," clarify the Protocol's anticipated achievements.
- d) Sandbars/Beaches – At 10, para.1: The Purpose and Need section should include citations to support the following statements:

- “Sandbars and beaches can provide key fish and wildlife habitat, protect archeological sites and vegetation structure, and provide camping opportunities in Grand Canyon.”
  - “One of the best tools available for rebuilding sandbars is to use dam operations to release short-duration high flows, preferably after sediment-laden tributary floods deposit new sand into the main channel.”
  - “Conservation of fine sediment and building of sandbars and beaches has not occurred to the degree anticipated in the 1996 Record of Decision.”
- e) Agency Roles – At 14-15: In order to provide an accurate depiction of the complexity and issues associated with identifying the HFE Protocol’s impacts, it may be important to expand the description of the “Role of the Agencies” to include more than their limited role under the GCPA. Specifically, the description would benefit from elaborating on the agencies’ roles regarding operation of Glen Canyon Dam over and above the requirements under the GCPA.
- f) Authorizing Actions, Permits or Licenses – At 19: In addition to acknowledging the need for Bureau of Indian Affairs permits for cultural/archeological work, the States recommend:
- i. Recognizing the U.S. Fish and Wildlife Service’s role in providing an Incidental Take Statement to address the potential effect of HFEs on the endangered humpback chub; and
  - ii. Acknowledging the appropriateness of consulting with the Upper Colorado River Commission (“UCRC” or “Commission”) to regularly inform the Commission of the progress and results of the HFEs that have the potential to affect interests in the Upper Basin. This latter recommendation is provided in recognition that the UCRC, in conjunction with the Upper Division States, plays a direct role in determining how to allocate and manage the Upper Basin’s apportionment of Colorado River water. As such, it would be both useful and appropriate for the Bureau to inform the Commission of plans, activities, and results of the experimental operations at Glen Canyon Dam that could impact monthly, daily, or hourly reservoir storage as well as hydropower production and revenues from the Glen Canyon power plant.
- g) Potential Limitations to HFE – At 20-23: The DEA recognizes specific limitations to conducting HFEs. The States recommend the DEA identify in this section the additional limitations set forth in other areas of the document. For example, on page 31, the DEA recognizes that water may be a limiting factor to the extent it cannot be moved from other months to assure sufficient water is available for an HFE without violating the Law of the River. Likewise, to remain consistent with representations throughout the document, the Potential Limitations section should clarify that a decision to perform either a spring or fall HFE will be precluded if it would hinder access to Colorado River entitlements or otherwise interfere with application of the Interim Guidelines, including but not limited to application of the mid-year review process. Specific examples of limitations the Interim Guidelines could impose on HFE implementation would be appropriate. Finally, this section should discuss whether and to what extent HFEs could be limited by the specific operating constraints for Glen Canyon Dam operations pursuant to the 1996 ROD and 1997 Operating Criteria.

- h) Proposed Action Description - At 26: The DEA states: "Water year releases would follow the MLFF [Modified Flow Fluctuating Flow] preferred alternative . . . ." However, water year releases are governed by the 2007 Interim Guidelines over and above MLFF. The DEA should remain consistent with this hierarchy. The DEA further states: "For the remainder of the proposed action period, through 2020, dam releases would follow the provisions of MLFF as defined in the 1996 ROD and the 2007 ROD unless required as an outcome of future ESA consultation." The States question the need to call out that operations would follow the 1996 and 2007 RODs unless required by future ESA [Endangered Species Act] consultations. Is there a specific consultation to which the DEA is referring? If not, isn't that the case regardless, and why would it be called out specifically here?
- i) Rapid Response Approach - At 28-29: The States appreciate and support Interior's commitment to test the rapid response approach as soon as practicable within early stages of the implementation of the HFE Protocol.
- j) Decision and Implementation Component - At 41: The DEA states that a decision process could result in an HFE being considered whether or not a positive sand balance is projected. However, the purpose and scope of the HFE Protocol is to authorize high-flow releases to determine how sand conservation could be improved for the benefit of downstream resources. See DEA at viii, 59-61, 65. The DEA should clarify what this statement means, and under what circumstances a decision to conduct an HFE in the absence of a positive sand balance could occur.
- k) 2007 Interim Guidelines - At 41: The States appreciate and support inclusion of this Section in the DEA analysis.
- l) Fall and Spring HFEs - At 43, 44: The DEA makes a number of statements about the timing of HFEs within the spring and fall HFE implementation periods that include the phrase "as practicable" or "to the degree practicable." The DEA should clarify what is meant by these phrases. Is there a possibility that an HFE could occur outside the fall or spring windows? Are impacts considered for that? The DEA should also clarify, consistent with representations in other parts of the document, that implementation of the HFE Protocol, including reallocation of monthly releases to accomplish an HFE, will not affect or influence annual release determinations for Lake Powell or Lake Mead.
- m) Role of Adaptive Management - At 44-48: In characterizing the role of the GCAMP and identifying the priorities of the desired future conditions, it is important to recognize that the primary purpose of Glen Canyon Dam has been and remains water operations, not the preservation of the Grand Canyon ecosystem as it existed prior to dam construction. As such, it is important for the GCAMP to consider all possible management actions, not just dam operations, in determining how to sustain and improve resources downstream of Glen Canyon Dam consistent with the GCPA.  
At 45: The States recommend the Science Plan include core monitoring components that will remain consistent during the life of the proposed action so that useful and comparable information can be analyzed.  
At 46 - Overarching Question #1: The States recommend inserting "naturally occurring sediment inputs to the Colorado River" to clarify the type of sediment the HFE Protocol is considering. The question would read: "Is there a 'Flow Only' operation (that is, a strategy for dam releases and naturally occurring sediment inputs

*to the Colorado River*, including managing tributary inputs with HFEs without sediment augmentation) that will rebuild and maintain sandbar habitats over decadal timescales?”

At 46 – Overarching Question #1b: The States recommend editing the question to include the underlined language and delete the strike outs as follows to accurately capture the purpose of the HFEs consistent with the language of the GCPA: Research Question #1b: Are there optimal times to conduct high flows to conserve sediment and build sandbars/beaches, increase in regard to sediment building, humpback chub survivability, and sustain or improve ecosystem values response?

At 46-48: In addition to the research questions identified as part of the Science Plan in the DEA, the FEA and decision documentation should commit to evaluate the effects of trout populations on humpback chub as a result of implementing the HFE Protocol.

- n) Dam Releases – At 55: The DEA proposes to adjust monthly release volumes as necessary to achieve a high-flow event in October-November or March-April. Such adjustments, according to the DEA, will not affect annual water year volumes. In arriving at this conclusion, it is important to recognize the Interim Guidelines refined the operational guidelines to include a combined monthly/annual methodology for determining the annual release volume for Lake Powell. Interim Guidelines at 16. The purpose of this combined methodology is to provide flexibility and “to respond to changing inflow forecasts while ensuring that the operation does not result in excessive changes in monthly releases from Lake Powell.” *Id.* Decisions to adjust monthly release volumes to accomplish an HFE must keep this refined operational methodology in mind.
- o) Water Quality – At 56: The DEA should clarify whether slight increases to salinity as a result of an HFE will impact requirements under Minute 242 of the International Boundary Water Commission or the Salinity Control Act of 1973.
- p) Air Quality – At 57-58: What impact, if any, will increased emissions as a result of an HFE or consecutive HFEs have on the Grand Canyon National Park’s ability to make progress in reducing haze pursuant to the Government Performance and Results Act?
- q) Sediment – At 67: The DEA should explain what is meant by the statement, “The manner for slowing erosion of sandbars following and HFE is an important piece of information that can be gathered from future HFEs.” Does this imply that steady flows may be part of future HFEs without additional NEPA analyses?
- r) Aquatic Food Base – At 75: The DEA states the foodbase is expected to recover within 1-4 months of a Spring HFE. However, Table 9 indicates that foodbase recovery took 1-8 months following the 1996 BHBF and up to 16 months after the 2008 HFE. It would be helpful to understand the basis for the DEA’s expectation for foodbase recovery.  
At 76-78: The DEA appears to identify a potential impact to the foodbase after a Fall HFE without identifying possible mitigation. If the foodbase is impacted, what standard will Interior use to determine whether the status of the resource is suitable for conducting future HFEs? *See* decision-making comment above.
- s) Humpback Chub – At 88: The DEA should cite to materials supporting the conclusion that HFEs are not expected to affect adult habitat use, feeding, or moving to and from spawning sites.

At 89: What is the basis for the DEA's conclusion that two consecutive HFEs are not expected to have long-term effects on chub populations?

At 89: The DEA acknowledges uncertainty of effects on chub from conducting more than two consecutive HFE. If negative effects are found during the monitoring and investigation, what will Reclamation/Interior do to mitigate the impacts? For example, Reclamation should delineate a population trigger for humpback chub below which high flow events would be suspended until the cause of the population decline is better understood. Similarly, Reclamation should also adopt a trigger for trout populations above which high flow events would be suspended until the increase in trout population and its associated impact on chub populations is better understood.

At 92-98: The DEA recognizes a potential impact to young-of-year chub as a result of HFE, but does not identify a mitigation approach. Instead, it points to the fact that effects are not having an impact on population, and are assumed not to have an effect in the future. What will Reclamation/Interior do, if such assumption is wrong? This is the type of standard that should be identified in the determining the suitability of resources under the decision-making process. *See comment 2 above.*

At 98: The DEA should summarize the conclusion for humpback chub in the document in addition to pointing to the summary table.

t) Cultural Resources – At 111: The DEA identifies a potential adverse impact on cultural resources. What mitigation, if any, will be undertaken to alleviate the affects and support the EA process?

u) Hydropower – At 112-115: The States welcome the DEA's consideration of "capacity" in addition to energy as part of the impacts analysis.

At – 113: The hydropower impacts analysis should recognize that customers of the Western Administration Power Administration ("Western") may be impacted by HFEs if Western is not required to provide replacement power.

At 114: The DEA states that water bypassing the power plant to conduct and HFE is water that is "spilled" and does not produce electricity. In this situation, the bypass of the power plant does not constitute a spill and should not be characterized as one. Rather, the bypass is an experimental action that has the potential consensus support of the states despite the fact that it does not constitute as spill.

At 120: The DEA would benefit from explaining why the simplified hydropower analysis is sufficient for the EA analysis but not an EIS analysis.

At 125: The DEA should identify that the non-use economics analysis may soon be outdated following the compilation of results from an upcoming survey to be implemented by Interior.

v) Table 18 – At 134: Where do the amounts for hydropower impacts come from? They do not appear to track with the estimates identified in the description of hydropower impacts, Tables 14-16.

x) Cooperating Agencies – At 140: Although the UCRC includes state representatives, it is not specifically a state agency or entity. This is especially true, given the fact that the make up of the Commission includes a Federal Commissioner.

y) Errata:

i) At 5, para. 3 – insert "prey" in last sentence "... trout that have been documented to prey upon native, endangered humpback chub."

- ii) At 35, Figure 3 – The *Science Plan* box in the planning and budgeting schematic is missing a word – (Research and ?).
- iii) At 39 – Reference to Section 2.2.4.3 is no longer accurate.
- iv) At 40 – Figure 5 – The Decision and Implementation component figure should include: 1) Consideration of limits to protocol in the Staff Review Box; and 2) Basin State Input in the Interior Consideration box.
- v) At 87 – “Canyon” should be added between “Glen” and “Dam” in the first full paragraph.
- vi) At 89 – Discussing downstream displacement, the DEA is missing a word between “preferred” and “can.”
- vii) At 113 – Second full paragraph, “than” should be changed to “that” to read: “The maximum amount of electric energy *that* can be produced . . .”
- z) *Science Plan – Appendix B*: The proposed science plan identifies a mechanism for monitoring the natural resources in an appropriate manner. To be successful, the core elements of the monitoring plan should remain sufficiently stable during the life of the HFE Protocol to allow for development and analysis of comparable results.
- aa) *Hydrology Input – Appendix D*: Given the summary description of how the hydrology model was disaggregated to hourly flows, the analysis and results done outside the Colorado River Simulation System should be considered more for comparative purposes and limited to use in the HFE Protocol.
- ab) *Sediment Analysis – Appendix E*: The sediment model is a simple, sand-mass balance used to help decide which type of HFE to run based on sediment inputs and potential hydrologies. It is important to note that the model does not differentiate between sediment in the channel, sandbar sediments, or other sediment sources. Furthermore, while the hydrographs for the model are important, water is presumed to always be available to manage any sediment input by making the necessary HFE release from the dam and then assuming flows as necessary for the remainder of the month to stay within the monthly volume identified in the Annual Operating Plan and 24-month studies. To the extent the decision on the type of HFE to run could coincide with operational decisions pursuant to the 2007 Interim Guidelines, the model must not influence the system’s operational determinations.

**6. Reservation of Rights.** In the course of reviewing the material included in the DEA, the States may have overlooked other factual or legal assertions that impact our respective interests. Our failure to raise such concerns in these comments, or to correct what we believe to be inaccurate assertions, shall not be construed as an admission with respect to any factual or legal issue, or a waiver of any rights for the purposes of any future legal administrative or other proceeding.

[Signatures on following page]

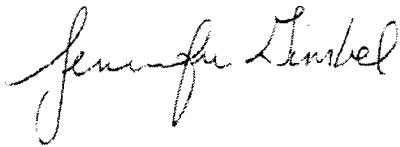




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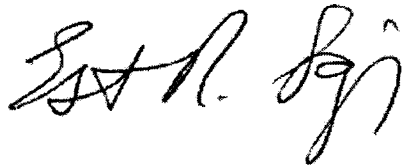
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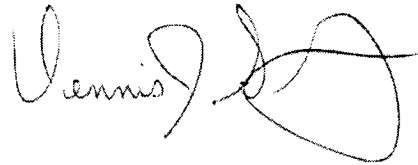
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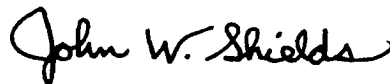
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